



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
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Tel (613) 632-5200

D3391-023
Job Sheet 168761-C



Part No: D3391-023

Job Qty: 1 ea

Part Name: Mid Tube Assembly



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/22/17

Job Tracking No:

Due Date: 12/8/17

Created By: Marie Lajeunesse

Type: Stock

Description:

Customer: Abu Dhabi Aviation (CABUD01)

PO Box 2723, Abu Dhabi International Airport Abu Dhabi, , 2723 United Arab Emirates ph:971 2 575 8000
fx:971 2 575 7775.

Note: DWG REV J SHEET 7 IPP A 05.10.20 New Issue KJ/EC IPP B IPP C 07.03.20 rev F dwg EC IPP D 07.03.28
re-format EC IPP E 07.10.31 ecn 1053P EC IPP Rev:F ECN 1056 07-11-13 DD verified by: EC IPP Rev:G 08-
09-08 new process (ecn 08-510) DD verified by:EC IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP Rev:J add in seq 140 expire date &b#
sikaflex DD 10.02.17 verified by:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		12/7/17	0.00	0.00	Start Up Skidtubes		
100	Skidtubes	1 pcs		12/7/17	0.88	2.11	Skidtubes		AP 2017/12/15
110	QC	1 pcs		12/7/17	0.00	0.00	QC5		AK 17-12-15
120	HandFinish	1 pcs		12/7/17	0.00	0.38	HandFinish1		BEB 17/12/16
130	QC	1 pcs		12/7/17	0.00	0.00	QC7		W
140	Skidtubes	1 pcs		12/7/17	0.00	2.11	Skidtubes		W
150	QC	1 pcs		12/7/17	0.00	0.00	QC5		BB
160	Skidtubes	1 pcs		12/7/17	0.00	2.11	Skidtubes		BB
170	QC	1 pcs		12/7/17	0.00	0.00	QC10		17-12-21
180	QC	1 pcs		12/7/17	0.00	0.00	QC5		AK 17-12-21
185	HandFinish	1 pcs		12/7/17	0.00	0.38	HandFinish2		2017-12-21 JSC
191	Spray Paint	1 pcs		12/7/17	0.00	0.91	Spray Paint	PO 038070	W 17/12/26
200	QC	1 pcs		12/7/17	0.00	0.00	QC14		
230	HandFinish	1 pcs		12/8/17	0.00	0.38	HandFinish4		
240	QC	1 pcs		12/8/17	0.00	0.00	QC5		
250	Packaging	1 pcs		12/8/17	0.00	0.00	Packaging3		
260	QC21-SA	1 Ea		12/8/17	0.00	0.00	QC21		

Part Op 100 - 1-Cut tube to finish length as per Dwg D3391 2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1
Descriptions: fwd saddle hole on one side only as per Dwg D3391 3-Open aft saddles and GHW holes to Ø0.4375" except for fwd saddle
holes 4-Remove .030" from Fwd indexing Ridge as per Dwg D3391 5-Remove indexing ridge on Fwd & Aft end of
skidtube as per Dwg D3391 6-Deburr, scribe batch # on aft end. 7- Locate D3391-021 in D3391-023 at 9.00" (see view
F-F) 8- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149
locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previously tranfer
drilled pilot holes in D3391-023/-021 using drill press. ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to
0.500" as per ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". D3391-021
BATCH: 5017279 9- Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.375" holes with paint marker,
DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG Locating from two fwd wearplate holes in D3391-023
drill remaining 6 wearplte holes in D3391-021 using DT8937 10- Open wearplate holes of D3391-023 assembly detail
section G-G to Ø0.375" (10 holes) as per Dwg D3391 Open wearplate holes of D3391-023 assembly detail section H-H to

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____

DISPOSITION

 Rework ☐
 rap ☐
 s-is ☐
 red ☐

 Skid-tube ☐
 Machining ☐
 Thermoforming ☐
 Large Fab ☐

 Cross tube ☐
 Small Fab ☐
 Finishing ☐
 Composite ☐

 Water Jet ☐
 Prod. Eng. Coord. ☐
 Rec/Store/Packaging ☐
 Supplier ☐

 Engineering ☐
 Quality ☐
 Other ☐

QTY Effective : _____

MRB (QSI042) Approval

Disposition

Completed By

Lead hand / Supervisor
Approval VerificationQC / QA Coordinator
Approval

FAULT CATEGORY

☐ Temperature/Cure
☐ Set-up
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Inspection Incomplete/Unqualified
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Instructions Incomplete/Unclear
☐ Drill Holes

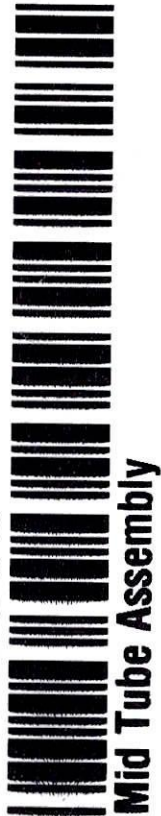
☐ Power Loss/Surge
☐ Folio/Program
☐ Grain
☐ Weld
☐ Wrong Stock Pulled
☐ Out of Sequence
☐ Off-set
☐ Mislabeled
☐ Fit/Function
☐ Misaligned/off center

☐ Positioned Wrong
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Drawing
☐ Finish
☐ Misread
☐ Turning Sequence

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DART
 AEROSPACE
S022899


Mid Tube Assembly

PART NO: D3391-023

Revision:

Operation: Start up Operation

Change No:

 Mfg Date: 12/15/17
 Job No: 168761-C
Misidentified ☐Past Due ☐OTHER: ☐

Ø0.297" (20 holes) as per Dwg D3391 Deburr and blow out all chips from inside tube, scribe

140 - 1-Open float bag holes as per dwg 2-C'sink float bag holes as per dwg 3- Prepare tube for welding 4-Bond web in place as per Dwg D3391 & QSI 015. Adhere for 12 hours) A/R Sikaflex exp 2018-04-21 batch#: 58654

NOTE:ENSURE WEB IS INSERTED IN AFT END OF TUBE

160 - 1-Weld crossbolt spacer as per dwg D3391 & QSI 004 2-grind weld flush AR M158673

185 - Re-alodine

191 - PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT:

230 - 1-Install Inserts as per Dwg

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	D2500-1-100 163253	1	92	0	0
140-Skidtubes	D3389-1 501892B	1	8	0	0
160-Skidtubes	D3681-1 5019147	5	111	0	0
230-HandFinish	ALS4-1032-130 5007249	20	12,098	0	0
	D3591-1 5019103	2	85	0	0

Part Specifications

Specifications could not be found.

Plex 11/22/17 1:31 PM Dart.lajeunesse.marie

DQA: _____ Date: _____

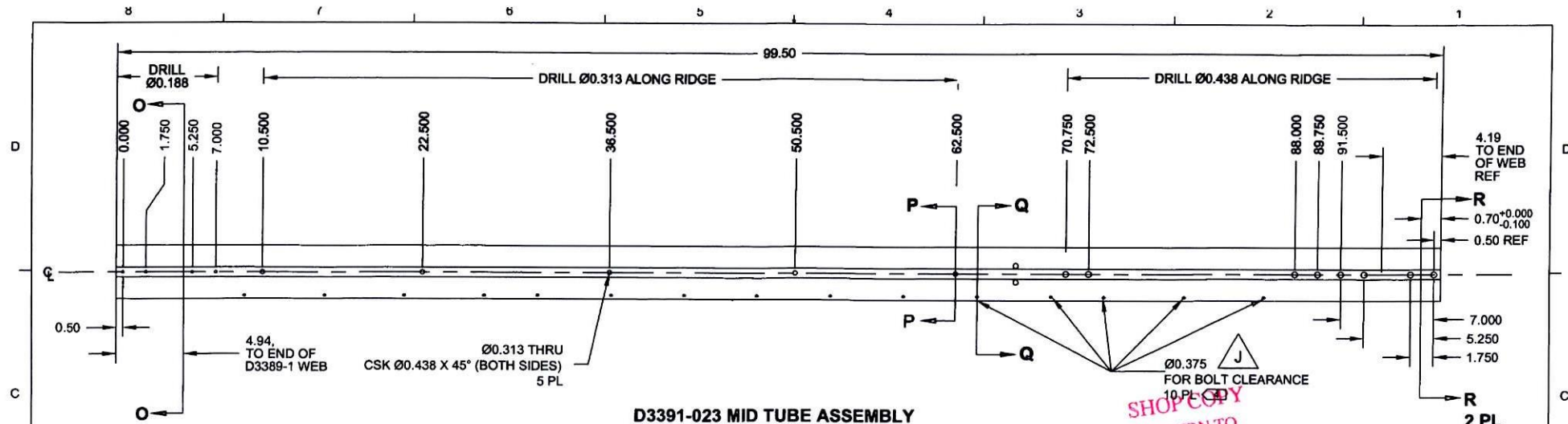


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

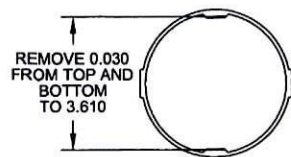
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

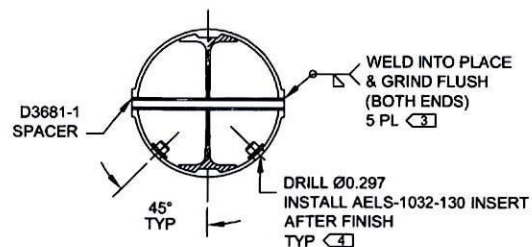


D3391-023 MID TUBE ASSEMBLY

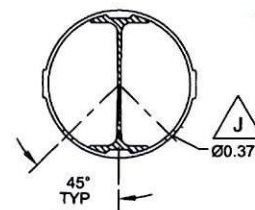
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 168761-C M-5 1711-22



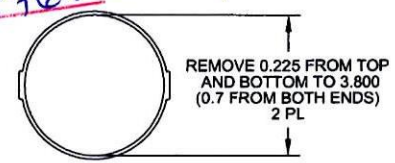
SECTION O-O
SCALE 2X



SECTION P-P
SCALE 2X



SECTION Q-Q
SCALE 2X <4>



SECTION R-R
SCALE 2X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT



D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004
- 4) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. CBORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED.

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.	<i>[Signature]</i>	D3391	SHEET 7 OF 11
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	412 FLOAT SKIDTUBE	NTS
DATE	16. 01.14	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	
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2016-04-28